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Application Serial No. 10/564,938
Amendment

PATENT
Docket: CU-4652

Amendments to the Claims

The Listing of Claims presented below replaces all prior versions, and listings, of claims in the Application.

The Applicant wishes to make the following amendments to the claims of the above patent Application:

Listing of claims:

1. (withdrawn) A device for combined sample treatment and sample carrying, comprising a plate with inlets at one side connected to respective compartments situated at respective array positions for receiving samples to be treated and analysed, wherein each compartment is in communication with an outlet enabling fluid flow through the compartment.
2. (withdrawn) A device according to claim 1, wherein the respective outlet simultaneously serves as a restriction for retaining a medium.
3. (withdrawn) A device according to claim 1, wherein the respective outlet comprises a restriction for retaining a medium.
4. (withdrawn) A device according to claim 3, wherein the outlet comprises a structure with restriction apertures.
5. (withdrawn) A device according to claim 3, wherein the outlet comprises a permeable membrane.
6. (withdrawn) A device according to claim 1, wherein the outlet is arranged at the other side of the plate opposite the inlet, wherein the respective compartment is formed

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between the inlet and the outlet.

7. (cancelled)

8. (withdrawn) A device according to claim 1, wherein the outlet is arranged at the other side of the plate displaced from the inlet, wherein the respective compartment is formed between the inlet and the outlet.

9. (withdrawn) A device according to claim 1, wherein the outlet is arranged at the same side of the plate displaced from the inlet, wherein the respective compartment is formed between the inlet and the outlet.

10. (withdrawn) A device according to claim 8 wherein the respective compartment is formed as a channel directed in the same plane as the plate.

11. (withdrawn) A device according to claim 10, wherein the respective compartment comprises a restriction for retaining a medium.

12. (withdrawn) A device according to claim 11, wherein the restriction comprises a grid.

13. (cancelled)

14. (cancelled)

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15. (withdrawn) A device according to claim 1, wherein the respective inlet comprises a structure, such as bars, for hindering matter to enter the compartment.
16. (withdrawn) A device according to claim 1, wherein an analysis zone is arranged at each outlet.
17. (withdrawn) A device according to claim 16, wherein the analysis zone is structured to achieve a well defined analysis area.
18. (cancelled)
19. (withdrawn) A device according to claim 17, wherein the analysis zone structure comprises a patterned structure, such as a hydrophilic layer or a hydrophobic layer, or a nanoporous surface or a planar surface or a combination thereof.
20. (withdrawn) A device according to claim 1, wherein a structured zone is arranged at each inlet.
21. (cancelled)
22. (withdrawn) A device according to claim 20, wherein the structured zone comprises a patterned structure, such as a hydrophilic layer or a hydrophobic layer or a nanoporous surface or a planar surface or a combination thereof.
23. (withdrawn) A device according to claim 1, wherein one or both of the sides of the device is made hydrophobic.

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24. (cancelled)

25. (cancelled)

26. (cancelled)

27. (withdrawn) A device according to claim 1, wherein the device is arranged to generate electrospray.

28. (withdrawn) A device according to claim 27, wherein the device comprises a nozzle at each outlet, and an electrode at each compartment.

29. (withdrawn) A device according to claim 28, wherein the nozzle is in the form of a pyramidal nozzle, a cylindrical nozzle or a conical nozzle.

30. (cancelled)

31. (cancelled)

32. (cancelled)

33. (currently amended) A method for analysis of samples comprising analytes such as biomolecules or small molecular organic compounds, using a combined sample treatment and sample carrier device, the device comprising a plate with inlets at one side connected to a respective compartments-compartment situated at respective array positions for receiving samples and a media for being to be-treated and analysed, each

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compartment being in communication with an outlet enabling fluid flow through the compartment comprising the steps of:

transferring the sample and the media received in the compartment to a washing step;

~~_____ supplying an external container with a sample;~~

~~optionally, subjecting the sample to a first treatment in the external container;~~

~~transferring the sample to the combined sample treatment and sample carrier device;~~

subjecting the sample and media to one or several additional treatments within the combined sample treatment and sample carrier device by to a second treatment exploiting fluid flow through the device, wherein a medium is trapped in the device each array position;

_____ capturing the analytes by using the media, the media being selected to have surface properties for capturing said analytes on said media; and

_____ analysing said captured analytes within said combined sample treatment and sample carrier device.

34. (cancelled)

35. (cancelled)

36. (cancelled)

37. (cancelled)

38. (currently amended) A method according to claim 33, wherein the additional second treatment comprises elution of the analytes, wherein an elution solution is

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drawn through the combined sample treatment and sample carrier device, thereby displacing predetermined components of the sample from the media.

39. (currently amended) A method according to claim 33, wherein the second additional treatment comprises transferring analytes captured from the sample to an analysis zone on the combined sample treatment and sample carrier device.

40. (cancelled)

41. (previously presented) A method according to claim 39 wherein the sample is subjected to crystallisation in the analysis zone.

42. (previously presented) A method according to claim 41, wherein the sample is drawn through the combined sample treatment and sample carrier device to the analysis zone with a solution containing a matrix for LDI, such as DHB, CHCA, FA, SA and THAP.

43. (currently amended) A method according to claim 39, wherein the analysis zone is situated positioned on the undersideside, opposing the inlet side of ~~and the combined sample treatment and sample carrier device is turned upside down for subjecting said plate to an analysis instrument.~~

44. (currently amended) A method according to claim ~~[[33]]~~39, wherein the second analysis zone is positioned on the inlet side of the combined sample treatment and sample carrier device. ~~treatment comprises electrospraying the sample to an analysis instrument.~~

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45. (currently amended) A method according to claim 33, wherein the combined sample treatment and sample carrier device is placed in a ~~suction~~vaccum fixture that is operated to ~~aspirate~~draw fluid through the device as and when required in the respective steps.

46. (currently amended) A method according to claim ~~[[34]]~~33, wherein the ~~medium~~media has a selective affinity for various biomolecules.

47. (currently amended) A method according to claim 46, wherein the ~~medium~~media has hydrophilic, hydrophobic, cation exchange, RP, SCX, IMAC or IEX functionality.

48. (currently amended) A method according to claim 46 wherein the ~~medium~~media comprises beads, particles, membranes or Empore disc pieces.

49. (currently amended) A method according to claim 46, wherein the ~~medium~~media is supplied to the combined sample treatment and carrier plate by in-situ (in-chip) polymerisation, such as a medium of porous polymer monolith.

50. (currently amended) A method according to claim 33, wherein the combined sample treatment and sample carrier device comprises several stacked ~~plates~~combined sample treatment and sample carrier devices, enabling fluid transport from one combined sample treatment and sample carrier device to the next.

51. (currently amended) A method according to claim 50, wherein different media are ~~carried by~~preloaded in the different platescombined sample treatment and sample carrier devices.

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52. (currently amended) A method according to claim 51, wherein the ~~second one or~~ several additional treatment treatments are performed simultaneously in the stacked ~~plates~~ combined sample treatment and sample carrier devices.

53. (currently amended) A method according to claim 51, wherein ~~that part of the second treatment is performed simultaneously in the stacked plates, and then the~~ stacked combined sample treatment and sample carrier devices ~~the stack is~~ disassembled for separate treatment ~~of the plates or analysis of the combined sample~~ treatment and sample carrier devices.

54. (cancelled)

55. (currently amended) A method according to claim ~~[[54]]~~ 33, wherein the analysis is optical, such as fluorescence detection, laser detection, scintillation detection or microscopy.

56. (currently amended) A method according to claim ~~[[54]]~~ 33, wherein the analysis comprises mass spectroscopy (MS), such as LDI, ESI, SELDI, DIOS, MALDI TOF-TOF, MALDI Q-TOF.

57. (currently amended) A method according to claim 33, wherein the ~~second additional treatment~~ comprises treatment with reagents for conducting enzymatic or chemical reactions involving captured analytes.

58. (cancelled)

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59. (cancelled)

60. (cancelled)

61. (cancelled)

62. (cancelled)

63. (withdrawn) A device according to claim 9, wherein the respective compartment is formed as a channel directed in the same plane as the plate.

64. (withdrawn) A device according to claim 63, wherein the respective compartment comprises a restriction for retaining a medium.

65. (withdrawn) A device according to claim 64, wherein the restriction comprises a grid.

66. (cancelled)

67. (cancelled)

68. (cancelled)

69. (new) A method according to claim 33, wherein , prior to the transferring step, the method further comprising the steps of:

supplying an external container containing the sample;

subjecting the sample to a first treatment in the external container; and

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adding the media to the external container containing the sample.

70. (new) A method according to claim 33 wherein the media is preloaded in the compartments and each compartment is processed according to the steps of:

subjecting the media to a first treatment within the combined sample treatment and sample carrier device; and

supplying the sample to the compartment whereby analytes comprised in the sample are captured on the media.